Complete Summary

GUIDELINE TITLE

Prompted voiding for persons with urinary incontinence.

BIBLIOGRAPHIC SOURCE(S)

Lyons SS, Specht JKP. Prompted voiding for persons with urinary incontinence. In: Titler MG, editor(s). Series on evidence-based practice for older adults. Iowa City (IA): University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core; 1999. p. 47. [57 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Urinary incontinence, including the following types:

- Urge incontinence
- Stress incontinence
- Mixed incontinence
- Functional incontinence

GUIDELINE CATEGORY

Evaluation
Management

CLINICAL SPECIALTY

Geriatrics
Nursing

Physical Medicine and Rehabilitation
Urology

INTENDED USERS

Advanced Practice Nurses
Nurses

GUIDELINE OBJECTIVE(S)

To provide information for implementing a treatment program of prompted voiding (PV) for older adults with urge, stress, mixed or functional urinary incontinence (UI).

To reduce the frequency and severity of UI episodes, increase self-initiated requests to toilet, and to prevent the complications associated with UI.

TARGET POPULATION

Older adults with urge, stress, mixed or functional urinary incontinence.

INTERVENTIONS AND PRACTICES CONSIDERED

Prompted voiding, a behavioral technique consisting of the following elements:

- Monitoring patient's continence status
- Prompting the individual to void prior to urine loss
- Praising appropriate toileting behaviors

MAJOR OUTCOMES CONSIDERED

- Number and volume of incontinent episodes
- Complications of skin breakdown, urinary tract infection, falls
- Patient satisfaction
- Quality of life

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The guideline developer performed searches of electronic databases, including Medline, HealthSTAR, PsychInfo, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). The developer also reviewed bibliographies of journal articles using keywords of "urinary incontinence," "prompted voiding," "behavioral

interventions," "aged," and "nursing homes." Journals scanned each month included: Journal of Gerontological Nursing, Geriatric Nursing, Journal of Applied Nursing Research, Nursing Research, Journal of the American Geriatric Society, Gerontologist, Journal of Wound, Ostomy and Continence Nursing, Journal of Gerontology, Urologic Nursing, and McKnight Long-Term Care News.

NUMBER OF SOURCE DOCUMENTS

100 source documents

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

A. Recommendations supported by evidence from properly designed and implemented controlled trial

B. Recommendations supported by evidence from properly designed and implemented clinical series

C. Recommendation supported by Expert Opinion

N. Recommendation supported by national clinical practice guidelines

COST ANALYSIS

The guideline developer reviewed published cost analyses. They report on a possible increase in cost to care for patients with urinary incontinence (UI) using the intervention being recommended noting that it takes more time to assist a person to the toilet than it does to change a urine soaked pad.

Professional care givers are often rewarded for the speedy completion of tasks rather than for promoting resident function. A person needing to void his or her bladder of urine must be toileted promptly; a wet pad can wait until it is convenient for the caregiver to change it. This unpleasant scenario is the current state of UI treatment in some institutions (as of the date of guideline development). One group of researchers compared the cost of an hourly checking and changing system to the UI management usually used in three nursing homes. The cost of the hourly system employed over a 12-hour patient-day was $3.35 while the usual costs were $1.52. Prior to treatment, subjects were changed an average of 1.4 times per 12 hours.

The guideline developer also discussed the costs of UI-related complications.

METHOD OF GUIDELINE VALIDATION

Clinical Validation-Pilot Testing
Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Prompted Voiding Technique	Caregiver Behavior
Approach person at scheduled PV time (15 minutes before or after assignment is acceptable).	Monitor
Greet individual.	Prompt
Wait 5 seconds for individual to self-initiate request (SIR) to toilet.	Prompt
Ask person if he or she is wet or dry.	Prompt
Physically check person to determine continence status.	Monitor
Give social feedback. Praise, if dry. No comment, if wet.	Praise
Prompt individual to toilet (regardless of continence status).	Prompt
Offer person assistance with toileting.	Prompt
Give social feedback. Praise desired toileting behavior.	Praise

Inform individual of the time of next scheduled PV session.	Prompt
Encourage individual to hold urine in bladder until next scheduled PV session.	Prompt
Encourage individual to SIR to toilet, as needed.	Prompt
Record results of PV session on urinary continence monitoring form.	Monitor

Individuals Likely To Benefit From Prompted Voiding (PV) - Recommendations supported by evidence from properly designed and implemented controlled trial (A) and properly designed and implemented clinical series (B).

It is recommended that clinicians do not solely rely upon the following predictors to determine whether PV might be a successful incontinence treatment for an individual.

The best predictor of an individual's response to PV is his or her success to a therapeutic trial of PV. Many people responsive to PV show a clinically significant increase in appropriate toileting behavior and continence levels during a 3-day trial, although maximal response to the treatment may not be realized until several weeks of PV.

Factors related to an individual's responsiveness to PV include:

- Normal bladder capacity > 200 cc and < 700 cc (A)
- More cognitively intact (A)
- Recognized need to void (A)
- Higher number of self-initiated requests to toilet (B)
- Higher completion of assigned PV sessions by nursing home staff (B)
- Baseline incontinence < 4 times/ 12 hours (A)
- Wet percentage < 20% during first 3 days of PV (B)
- Appropriate toileting > 66% during first 3 days of PV (B)
- At least %50 of voids into toileting receptacle during first day of PV (A)
- Able to void successfully when given toileting assistance (A)
- Ability to ambulate independently (B)
- Maximum voided volume > 150cc (A)
- Post-void residual < 100 cc (A)

Factors associated with an individual's non-responsiveness to PV include:

- Decreased cognition (B)
- Unable to successfully initiate toileting on first day of treatment (A)
- Increased age (B)

Factors possibly related to an individual's non-responsiveness to PV include:

- High post-void residuals (A)
- Low maximum voided volume (A)
- High frequency (> 40%) of "dry runs", individual indicated the need to toilet but did not void any urine into appropriate toileting receptacle (A)

After completion of a therapeutic trial of PV, an individual's responsiveness to the intervention should be determined by his or her caregiver.

Outcomes Associated With Prompted Voiding - Recommendation supported by evidence from properly designed and implemented controlled trials (A), properly designed and implemented clinical series (B), and expert opinion (C).

Presently, outcome measures for the treatment of UI have not been validated in clinical trials. Blaivas in a review of incontinence practice standards recommends the number and volume of UI episodes as primary outcome variables. Secondary outcome measures, include patient satisfaction, quality of life, bladder symptoms, post-void residual urine, and other urodynamic measures (C). Palmer and colleagues recommend dryness level, staff compliance level, and number of wet episodes as indicators of prompted voiding success (C).

Continence outcomes identified to be responsive to prompted voiding treatment in research studies include:

- Increase in daily average number of dry checks/non-wet episodes (A)
- Increase in average volume of continent voids (B)
- Decrease in average volume of incontinent voids (B)
- Identification of individual patterns of UI (B)
- Recognizes urge to void (A)

Individualized Toileting Schedules - Recommendation supported by evidence from properly designed and implemented controlled trial (A), properly designed and implemented clinical series (B), and national clinical practice guidelines (N)

Researchers recommend individualizing the PV schedule to meet the toileting needs of the person with UI. The identification of individual voiding patterns can promote the highest level of continence for the incontinent person while minimizing the caregiver time required for completion of the intervention. Rather than attempting to find the toileting schedule that best meets the needs of the individual, facilities may attempt to toilet everyone on an every two-hour schedule. However, some people respond best to an every three or four hour toileting schedule. Persons who responded to PV early in the intervention are able to decrease toileting sessions from every two hours to three or more hours. This longer time period between scheduled PV sessions would free staff up for the completion of other nursing interventions.

Individuals unable to maintain urinary continence with at least an every two-hour toileting schedule after a thorough trial (4 to 7 weeks) of PV are not likely to respond given additional experience with the intervention. If the incontinent individual needs to be toileted more frequently than every two hours in order to maintain continence, he or she should not continue using prompted voiding. A scheduled toileting plan augmented with incontinence aids and further evaluation for causes of and treatment for UI is recommended.

The completion of a bladder record, voiding diary or other type of monitoring system can help patients, family members, or health care professionals to identify individual patterns of UI. Colling and colleagues used an electronic data logger to record exact times of voiding: 85% of the subjects in this study were found to have regular voiding patterns over the 3-day data collection period. Another study using a paper monitoring system and every one-hour checking schedule was able to identify individual voiding patterns in a significant number of elderly female nursing home residents within two weeks of initiating the monitoring system.

Once regular voiding patterns have been identified, caregivers need to be made aware of this pattern. Posting individual toileting schedules in convenient locations and staff meetings to discuss resident response to PV has helped some facilities to maintain high levels of continence for extended periods of time. Staff adherence to the PV schedule, toileting the incontinent person within 30 minutes of the scheduled session and immediately upon SIR to toilet is essential to achieve maximal continence levels.

Self-Initiated Requests For Toileting - Recommendation supported by evidence from properly designed and implemented controlled trials (A), properly designed and implemented clinical series (B)

One outcome of PV that has interested many UI researchers is self-initiated requests (SIR) for toileting. SIR are any attempt by the incontinent person to notify his or her caregivers of his or her need to toilet. Behaviors associated with SIR might include verbal toileting requests, use of a call light, or attempts to toilet self without staff assistance. PV treatment is thought to increase the incontinent individual's awareness of the need to void. It was hoped that this increased awareness of bladder sensation would show a corresponding increase in the number of daily SIR.

Research findings about SIR are mixed. Some researchers have reported an increase in SIR during PV treatment ranging from 2.0 to 2.8 SIR per patient per day. This finding would seem to support the hypothesis that an increase awareness of the need to void is an outcome of PV. However, other researchers have reported either a decrease or no change in the number of daily SIR. Studies of long-term care resident s that reported a decrease or no change in SIR suggest that PV may promote resident dependence upon nursing home staff for maintenance of urinary continence.

Individual SIR responses may be related to cognition level. Kaltreider and colleagues note that the women in their study who had the greatest increases in the number of SIR were those with Mini-Mental Status Examination scores of > 10 (scale range 0-30) and those living at the long-term care facility less than one year.

The evidence for changes in SIR is contradictory. Therefore, it is recommended that protocol users measure the changes in SIR during initial assessment of response to PV, but not to rely on SIR as an indicator of an individual's ability to maintain continence with PV. SIR is not an expected outcome of PV for persons with moderate to severe cognitive impairment.

Social Feedback For Toileting Behavior - Recommendation supported by expert opinion (C)

Most PV protocols have incorporated social feedback into the treatment plan. Social feedback is based upon behavioral modification theory. Social feedback may be either positive or corrective. Positive feedback involves praising the incontinent individual for successful toileting behavior including staying dry between scheduled trips to the toilet; self-initiating requests to toilet; responding positively to prompts to void; and for accurate reporting of continence status. In addition to praise for toileting performance, special attention from the caregiver, such as engaging in conversation unrelated to toileting behavior, offering fluids, or assisting with additional personal grooming, may encourage the person with UI to continue using the PV program.

When corrective social feedback is used, it should be used minimally and at an adult level. Examples of corrective feedback include: correction of inaccurate reporting of continence status; repeating prompts to toilet at least twice; reminders to hold urine unt8il next scheduled toileting; reminders to contact staff for toileting assistance; and/or cleaning of an UI episode without verbal comment to the incontinent individual.

No studies have examined the relationship between social feedback and improvements in continence status. It is unknown whether subjects respond with improved toileting behaviors because of the social rewards related to successful toileting behaviors or in response to an environment which is more supportive of toileting behaviors. However, continence experts seem to agree that socializing the individual to appropriate toileting behaviors is necessary for the success of the PV intervention.

CLINICAL ALGORITHM(S)

Algorithms are provided for:

- Behavioral Management Strategies for Treatment of Urinary Incontinence
- Prompted Voiding Treatment--3-Day Assessment and Intervention Trial
- Determining Responsiveness to Prompted Voiding

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

The potential outcome of prompted voiding (PV) is urinary continence. Reductions of 0.5 to 2.2 episodes of urinary incontinence (UI) per patients per day have been

reported. In addition, some studies have shown a decrease in the amount of incontinent voids and an increase in the amount of continent voids during the PV intervention. A decrease in the frequency of pressure ulcers and urinary tract infections has been realized using an every two-hour toileting schedule to improve continence.

POTENTIAL HARMS

- There are no health risks associated with the use of behavioral techniques for the treatment of urinary incontinence (UI). The potential adverse effect of nonsuccess with prompted voiding is continued UI.
- As incontinence care shifts from a focus on collecting and disposing of UI aids to one of promoting continence, costs of UI care may initially increase.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This research-based practice protocol is a general guideline. Patient care continues to require individualization based on patient needs and requests.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

The appendices in the guideline document include strategies for implementation as well as tools to evaluate outcome and process factors following implementation.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1999

GUIDELINE DEVELOPER(S)

University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core - Academic Institution

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GUIDELINE COMMITTEE

Research Development and Dissemination Core

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

An update is not in progress at this time.

GUIDELINE AVAILABILITY

Electronic copies: Not available at this time.

Print copies: Available from the University of Iowa Gerontological Nursing Interventions Research Center, Research Dissemination Core, 4118 Westlawn, Iowa City, IA 52242. For more information, please see the University of Iowa Gerontological Nursing Interventions Research Center Web site.

AVAILABILITY OF COMPANION DOCUMENTS

None available

NGC STATUS

This summary was completed by ECRI on July 26, 1999. The information was verified by the guideline developer as of November 12, 1999.

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